

U00X SERIES

ULTRASONIC GAP SWITCH U002, U003 & U004 ULTRASONIC MODELS

DESCRIPTION

The U00X Series Solid-State Level Switches are reliable, low-cost liquid level controls for use in installations where mechanical float-type switches are impractical. U00X models are compatible with many liquids, regardless of the fluid's density or conductivity. The units require no calibration, withstand pressures up to 2,000 PSIG and their compact, 7/8" diameter probes install in any orientation. U00X models are constructed from durable and easy-to-clean 316 stainless steel with probe lengths available up to 100". Optional materials include CPVC, PVDF and Hastelloy C.

PRINCIPLE OF OPERATION

An ultrasonic transmitter and receiver detect the presence of fluid between two piezoelectric crystals sealed within the sensing gap. As the gap fills with liquid, an ultrasonic wave signal passes between the crystals and either results in an output shift from 8 mA to 16 mA (U002), or activates a relay (U003 & U004).

KEY FEATURES

- No Moving Parts: Pulsed 2 MHz Ultrasonic Signal
- Horizontal or Vertical Orientation
- Compact 7/8" Diameter Probe
- No Calibration Required
- Easy Two-Wire Output Installation & Intrinsically-Safe When Connected With Barrier (U002)
- "Fail-Safe" Mode Available (U004)

ENVIRONMENTAL

- Process Temperature:
-40° to +185° F (-40° to +85° C)
- Process Pressure:
PVDF: 50 PSIG (3.4 bar)
CPVC: 200 PSIG (13.8 bar)
316 Stainless Steel: 2,000 PSIG (137.9 bar)
Hastelloy C: 2,000 PSIG (137.9 bar)





SPECIFICATIONS

MODEL	INPUT	OUTPUT
U002	12 to 35 VDC	Current Shift; 8 mA (Dry Sensor Tip), 16 mA (Wet Sensor Tip)
U003	12 to 35 VDC	SPDT Relay; 1 Amp @ 30 VDC, 0.5 Amp @ 125 VDC/150 VAC
U004	24 to 30 VDC	SPDT Relay; 1 Amp @ 30 VDC, 0.5 Amp @ 125 VDC/150 VAC

ELECTRICAL

- Input: See Chart Below
- Output: See Chart Below
- Response Time: < 1/2 Second
- Crystal Frequency: 2 MHz
- Power Consumption: 1 Watt (Max.)

APPLICATIONS

-  Pump Control & Protection
-  Fill-Line Monitoring
-  Level Monitoring
-  Leak Detection



DIMENSIONS

